

**STATEMENT OF BASIS (AI No. 161761)**

for draft Louisiana Pollutant Discharge Elimination System permit No. LA0124478 to discharge to waters of the State of Louisiana.

**THE APPLICANT IS:** Baker Hughes Oilfield Operations  
Baker Hughes INTEQ Supercenter  
1058 Baker Hughes Drive  
Broussard, LA 75108

**ISSUING OFFICE:** Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services  
Post Office Box 4313  
Baton Rouge, Louisiana 70821-4313

**PREPARED BY:** Yvonne Baker

**DATE PREPARED:** March 19, 2009

**1. PERMIT STATUS****A. Reason For Permit Action:**

Issuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term.

**B. NPDES permit –** NPDES permit effective date: N/A  
NPDES permit expiration date: N/A  
EPA has not retained enforcement authority.

**C. LPDES permits –**  
LPDES permit effective date: N/A  
LPDES permit expiration date: N/A

**D. Date Application Received:** November 5, 2008

**2. FACILITY INFORMATION****A. FACILITY TYPE/ACTIVITY - repair and maintenance of oilfield equipment**

Baker Hughes INTEQ Supercenter performs repairs and maintenance on down hole drilling systems and evaluation system tools used to drill oil and gas wells. Non-hazardous solids and used oil are extracted and disposed of offsite. The facility proposes to discharge exterior equipment washwater, treated sanitary wastewater and industrial stormwater runoff.

**B. FEE RATE**

1. Fee Rating Facility Type: minor
2. Complexity Type: II; (BPJ to 0 points due to minimal flow from the facility)
3. Wastewater Type: II
4. SIC code: 1389 and 7699

**C. LOCATION -** on Baker Hughes Drive in Broussard, Lafayette Parish  
Latitude 30° 04' 53", Longitude 91° 56' 34"

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### 3. **OUTFALL INFORMATION**

#### Outfall 001

Discharge Type: exterior equipment washwater  
Treatment: settling tank and oil/water separator  
Location: at the point of discharge from the oil/water separator prior to mixing with other waters  
Flow: 4500 GPD  
Discharge Route: via ditch and retention pond thence into local drainage thence into LaSalle Coulee

#### Outfall 002

Discharge Type: treated sanitary wastewater  
Treatment: mechanical treatment plant  
Location: at the point of discharge from the STP prior to mixing with other waters  
Flow: < 5000 GPD  
Discharge Route: via ditch and retention pond thence into local drainage thence into LaSalle Coulee

### 4. **RECEIVING WATERS**

STREAM - via ditch and retention pond thence into local drainage thence into LaSalle Coulee

BASIN AND SEGMENT - Vermilion - Teche Basin, Segment 060801

DESIGNATED USES -  
a. primary contact recreation  
b. secondary contact recreation  
c. propagation of fish and wildlife  
f. agriculture

### 5. **TMDL STATUS**

Subsegment 060801, Vermilion River-From LA-3073 bridge, is not listed on LDEQ's Final 2006 303(d) list as impaired. However, subsegment 060801 was previously listed as impaired for phosphorus, nitrogen, organic enrichment/ low DO, pathogen indicators, suspended solids/ turbidity/ siltation, and carbofuran, for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDL's and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDL's have been established for subsegment 060801:

#### Carbofuran

The TMDL for *Carbofuran in the Mermentau and Vermilion Teche River Basins* was final on March 21, 2002. No allocation was given to point source discharges in the Vermilion - Teche River Basin. According to the TMDL, there is only one point source in the Vermilion - Teche (FMC Corp. LA0064360) but it does not discharge Carbofuran. In addition, this facility has no potential to discharge Carbofuran. Therefore, requirements for Carbofuran will not be placed in this permit.

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Suspended solids/turbidity/siltation

As per the *TMDL for TSS, Turbidity, and Siltation for the 15 Subsegments in the Vermilion River Basin*, point source loads are so small as to be insignificant, and because effective policies are in place to limit TSS discharges, no specific reductions from point sources are required. Standard TSS limitations are included in this permit.

Pathogen Indicators

Per *The Vermilion River Fecal Coliform TMDL*, there will be no change in the permit requirements based upon a wasteload allocation resulting from this TMDL. The pathogen indicators impairment shall be addressed through the standard fecal coliform limitations in this permit.

Organic Enrichment/Low DO

Per the EPA's *Vermilion River Dissolved Oxygen and Nitrogen TMDL*, the limits apply to sanitary discharges, and process outfalls of food processors and seafood processors. For discharges less than 25,000 GPD, secondary limits shall apply as per the TMDL. The organic enrichment/low DO impairment shall be addressed through the BOD<sub>5</sub> parameter for Outfall 002 and the COD parameter for Outfall 001.

Nitrogen

The *TMDL for Dissolved Oxygen and Nutrients in the Vermilion River* was final on April 5, 2001. No allocation was given to point source discharges in the Vermilion - Teche River Basin. LDEQ's position on nutrients, as supported by the ruling in *Sierra Club v. Givens*, 710 So.2d 249 (La. App. 1st Cir. 1997), writ denied, 705 So.2d 1106 (La. 1998), is that when oxygen-demanding substances are controlled and limited in order to ensure that the dissolved oxygen criterion is supported, nutrients are also controlled and limited. LAC 33:IX.2707.D.1.f.iii allows the establishment of effluent limitations based on an indicator parameter for the pollutant of concern. LDEQ's consistent approach to controlling nutrients where the WQMP does not otherwise require specific nutrient limitations is achieved by limiting the discharge of oxygen-demanding substances through the COD and BOD<sub>5</sub> limitations. Compliance with the COD and BOD<sub>5</sub> limitations as the indicator parameters will result in the control of nutrients from the discharge sufficient to attain and maintain the applicable water quality standard. Effluent monitoring of the indicator parameter as conducted by the permittee in accordance with the effluent limitations of the permit in addition to LDEQ's ambient water quality monitoring program will allow for further evaluation by the Department to determine the effectiveness of the limitation. The reopener clause located in Other Conditions of the permit allows the Department to modify or revoke and reissue the permit if the limitations as set on the indicator parameter are shown to no longer attain and maintain applicable water quality standards.

Phosphorus

As per the February 29, 2000 Delist (Federal Register Notice: Vol. 65, Num. 173, pages 54032-54034, 9/6/2000), assessment of new data and information shows this segment is meeting water quality standards for Phosphorus. Therefore, requirements for total phosphorus were not included in this permit.

**6. PROPOSED EFFLUENT LIMITS**

BASIS - See Rationale below.

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## **7. COMPLIANCE HISTORY/COMMENTS**

A. OEC - N/A; initial permit

B. DMR Review/Excursions - N/A; initial permit

## **8. ENDANGERED SPECIES**

The receiving waterbody, Subsegment 060801 of the Vermilion - Teche Basin is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated November 17, 2008 from Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. Therefore, the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

## **9. HISTORIC SITES**

DEQ has not received any comments from SHPO. Therefore, in accordance with the "Memorandum of Understanding (MOU) for the Protection of Historic Properties in Louisiana Regarding LPDES Permits," if no comments are received by LDEQ within the 30-day comment period, the LDEQ may consider that the SHPO has waived the right to provide comments, and the LDEQ may proceed with the permitting action.

## **10. TENTATIVE DETERMINATION**

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in the application.

## **11. PUBLIC NOTICES**

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

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### Rationale for Baker Hughes Oilfield Operations

#### 1. Outfall 001 – exterior equipment washwater, (estimated flow is 4500 GPD)

Pollutant	Limitation		Reference
	Monthly Avg	Daily Max	
	mg/L		
Flow	Report	Report	
COD	200	300	Similar discharges*, LAG480000 (BPJ)
TSS	---	45	Similar discharges*, LAG480000 (BPJ)
Oil & Grease	---	15	Similar discharges*, LAG480000 (BPJ)
Soaps & Detergents	Inventory Record	---	Similar discharges*, LAG480000 (BPJ)
Oil & Grease, Visual	---	No Presence	Similar discharges*, LAG480000 (BPJ)
pH, s.u.	6.0 (min)	9.0 (max)	Similar discharges*, LAG480000 (BPJ)

**Treatment:** settling and oil/water separator

**Monitoring Frequency:** daily for Oil and Grease, Visual and quarterly for flow, TSS, COD, oil and grease, and pH at the point of discharge from the oil/water separator prior to mixing with other waters. Soaps and Detergents: document in a quarterly inventory record the quantity and type of any Soap and/or Detergent used during each calendar month.

**Limits Justification:** Limits and monitoring frequencies are based on current guidance for similar discharges from other facilities and the Light Commercial General Permit, LAG480000 effective August 1, 2001.

Note: EPA Guidelines for Metal Products & Machinery (40 CFR Part 438) are applicable; however, more stringent state requirements for exterior equipment washwater are being placed in the permit.

NOTE: Residual hauled fluids known as “heels” are not authorized to be discharged through this outfall. The “heels” are subject to the no discharge requirement for drilling fluids as addressed in the effluent guidelines and standards for the Coastal Subcategory of the Oil & Gas Extraction Point Source Category (40 CFR 435).

#### 2. Outfall 002 – treated sanitary wastewater (estimated flow is less than 5000 GPD)

Pollutant	Limitation		Reference
	Monthly Avg	Weekly Avg	
	mg/L		
Flow	---	Report	
BOD <sub>5</sub>	30	45	Similar discharges* (BPJ), LAG530000
TSS	30	45	Similar discharges* (BPJ), LAG530000
Fecal Coliform colonies/100ml	200	400 (Daily Max)	Similar discharges* (BPJ), LAG530000
pH, s.u.	6.0 (min)	9.0 (max)	Similar discharges* (BPJ), LAG530000

**Treatment:** mechanical treatment plant

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**Monitoring Frequency:** Semiannually for all parameters at the point of discharge from the STP prior to mixing with other waters.

**Limits Justification:** Limits and monitoring frequencies are based on current guidance for similar discharges from other industrial facilities and the Class I Sanitary Discharge General Permit, LAG530000 effective November 1, 2007.

\* Existing permits for similar outfalls

BPJ Best Professional Judgement

su Standard Units

**NOTE**

For outfalls containing concentration limits, the usage of concentration limits is based on BPJ for similar outfalls since the flow is variable and estimated.

**STORM WATER POLLUTION PREVENTION PLAN (SWP3) REQUIREMENT**

A SWP3 is included in the permit because in accordance with LAC 33:IX.2511.A.1, storm water discharges shall not be required to obtain an LPDES permit "... except... discharges associated with industrial activity." In accordance with LAC 33:IX.2511.B.14.a-k, facilities classified as SIC code 1389 is considered to have storm water discharges associated with industrial activity.

**For first time permit issuance**, the SWP3 shall be prepared, implemented, and maintained within six (6) months of the effective date of the final permit. **For renewal permit issuance**, the SWP3 shall be reviewed and updated, if necessary, within six (6) months of the effective date of the final permit. The plan should identify potential sources of storm water pollution and ensure the implementation of practices to prevent and reduce pollutants in storm water discharges associated with industrial activity at the facility (see Narrative Requirements for the AI).